In the claims:

1-6. (cancelled)

7. (currently amended) A method for performing biometry, comprising:

removing a lens from an eye; and

making biometric measurements with a partial coherence interferometry (PCI) device aimed at the eye after removal of the lens therefrom.

8. (original) The method according to claim 7, further comprising calculating optical features based on the biometric measurements and selecting an intraocular lens (IOL) in accordance with the optical features.

9. (original) The method according to claim 7, further comprising making biometric measurements with the PCI device aimed at the eye after insertion of an IOL into the eye.

10. (original) The method according to claim 7, further comprising making pre-incision biometric measurements with the PCI device.

11. (new) The method according to claim 7, wherein the PCI device is connected to a microscope, and the method further comprises using said microscope to focus radiation from the PCI device to the eye.

12. (new) The method according to claim 11, wherein said PCI device comprises an interferometer that directs a beam to a beam splitter, and the method further comprises using said beam splitter to direct a portion of radiation incident thereon towards a lens of said microscope.

13. (new) The method according to claim 12, wherein said PCI device further comprises a lens system, and the method further comprises using said microscope to focus radiation incident thereon to a portion of the eye to generate a secondary radiation source on the portion of the eye, wherein radiation emanating from the secondary radiation source passes through said beam splitter and impinges upon said lens system.

14. (new) The method according to claim 13, further comprising using at least one photodetector to detect radiation exiting said lens system.

15. (new) The method according to claim 14, further comprising processing an output from said at least one photodetector.

16. (new) The method according to claim 12, wherein said interferometer comprises a Michelson interferometer, and a difference between path lengths of radiation traversing arms of the Michelson interferometer equals the product of the length and refractive index of a reference eye.